

**Amendments to the Drawings:**

Figure 1 has been amended to show the first conductivity type cladding layer recited in claim 8. As supported in the original claim 8, the first conductivity type cladding layer 17 is interposed between the first conductivity type contact layer 16 and the multiple  
5 quantum well light emitting layer 18. No new matter has been added through this amendment to Figure 1. Acceptance of the amended figure is respectfully requested.

Attachments:	Replacement Sheet	1 page
	Annotated Sheet Showing Changes	1 page

10

**REMARKS/ARGUMENTS****1. Request for Continued Examination:**

The applicant respectfully requests continued examination of the above-indicated application as per 37 CFR 1.114.

5

The amendments made to the claims in the above section are over the last entered amendment filed March 17, 2005.

**2. Objection to claim 8:**

10        Claim 8 is objected to under 37 C.F.R. 1.75(d) because "the first conductivity type cladding layer" of claim 8 has not been disclosed in the remainder of the specification nor illustrated in any of the drawings. Appropriate correction is required.

**15    Response:**

As noted above, Fig.1 has been amended to illustrate the first conductivity type cladding layer.

20        In addition, paragraphs [0014] and [0019] of the specification have been amended to describe the claimed first conductivity type cladding layer. In the specification, the first conductivity type cladding layer is referred to as the n-type cladding layer 17. No new matter has been added, and reconsideration of claim 8 is requested.

**25    3. Objection to the specification:**

The disclosure is objected to because "the first conductivity type cladding layer" of claim 8 has not been disclosed in the remainder of the specification. Appropriate correction is required.

**30    Response:**

The applicant has amended paragraphs [0014] and [0019] of the specification to describe the claimed first conductivity type cladding layer. In the specification, the first conductivity type cladding layer is referred to as the n-type cladding layer 17. No new matter has been added, and reconsideration of claim 8 is requested.

4. Rejection of claims 1, 3, 4, 10, and 11 under 35 U.S.C. 102(e) and 35 U.S.C. 103(a):

Claims 1, 3, 4, 10, and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Kneissl et al (US 6,515,308), and additionally rejected under 35 U.S.C. 103(a) as being unpatentable over Kneissl et al.

**Response:**

Claim 1 has been amended to overcome this rejection. Claim 1 now recites that the nitride based dual dopant contact layer comprises "at least a p-type dopant and an n-type dopant, and a material of the p-type dopant being different from a material of the n-type dopant". This limitation is supported in the last sentence of paragraph 0019, and no new matter has been added through this amendment.

Although Kneissl teaches the use of silicon, and Fukuda teach that silicon can substitute for group-III or group-V lattice atoms, Kneissl does not teach that the material of the p-type dopant is different from a material of the n-type dopant. Therefore, Kneissl does not anticipate the currently amended claim 1 since Kneissl does not teach all of the claimed limitations.

Claims 3, 4, 10, and 11 are dependent on claim 1, and should be allowed if claim 1 is allowed. Reconsideration of claims 1, 3, 4, 10, and 11 is respectfully requested.

5. Introduction to currently amended claims 2 and 19:

Claims 2 and 19 have been amended to change the limitation "AlInGaN

based material "to  $\text{Al}_a\text{In}_b\text{Ga}_{1-(a+b)}\text{N}$  ( $0 \leq a \leq 1$ ;  $0 \leq b \leq 1$ ; and  $0 \leq a+b \leq 1$ )". To those skilled in the art, the term "AlInGaN-based material" includes all possibilities of materials denoted by the formula  $\text{Al}_a\text{In}_b\text{Ga}_{1-(a+b)}\text{N}$  ( $0 \leq a \leq 1$ ;  $0 \leq b \leq 1$ ; and  $0 \leq a+b \leq 1$ ). Further evidence of the usage of the term

5 "AlInGaN-based material" is found in two prior art documents: US Patent 6,045,626 issued to Yano et al. and US Patent 5,929,466 issued to Ohba et al. The explanation of this chemical formula is given by Yano et al. in col.13, line 61 to col.14, line 2, and by Ohba et al. in col.1, lines 28-30. Therefore, no new matter is added through amended claims 2 and 19.

10 6. Introduction to new claims 20 and 21:

New claim 20 contains the limitations of "the nitride based dual dopant contact layer being made of  $\text{Al}_a\text{In}_b\text{Ga}_{1-(a+b)}\text{N}$  ( $0 \leq a \leq 1$ ;  $0 \leq b \leq 1$ ; and  $0 \leq a+b \leq 1$ )" and "the material of the p-type dopant is different from a material of the n-type dopant". The limitation of "the nitride based dual dopant contact layer being made of  $\text{Al}_a\text{In}_b\text{Ga}_{1-(a+b)}\text{N}$  ( $0 \leq a \leq 1$ ;  $0 \leq b \leq 1$ ; and  $0 \leq a+b \leq 1$ )" is identical to what is found in the amended claim 2 and the amended claim 19. The limitation of "the material of the p-type dopant is different from a material of the n-type dopant" is supported in the last sentence of paragraph 0019.

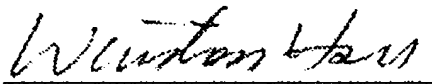
20 Therefore new claim 20 should be in allowable form since the cited prior art does not teach "the nitride based dual dopant contact layer being made of  $\text{Al}_a\text{In}_b\text{Ga}_{1-(a+b)}\text{N}$  ( $0 \leq a \leq 1$ ;  $0 \leq b \leq 1$ ; and  $0 \leq a+b \leq 1$ )" and "the material of the p-type dopant is different from a material of the n-type dopant".

25 New claim 21 specifies that in the nitride based dual dopant contact layer, the n-type dopant is made of Si, Ge, Sn, Te, O, S, or C and the p-type dopant being made of Mg, Zn, Be, or Ca. This limitation is fully supported in claim 19, and no new matter has been added. Since the examiner has indicated that claim 19 would be allowable if rewritten in independent form, claim 21 should be allowable over the cited prior art. Acceptance of new claims 20 and 21 is

respectfully requested.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

5 Sincerely yours,



Date: Oct. 03, 2005

Winston Hsu, Patent Agent No. 41,526

10 P.O. BOX 506, Merrifield, VA 22116, U.S.A.

Voice Mail: 302-729-1562

Facsimile: 806-498-6673

e-mail : winstonhsu@naipo.com

15 Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 12 hours behind the Taiwan time, i.e. 9 AM in D.C. = 9 PM in Taiwan.)

## Annotated Sheet

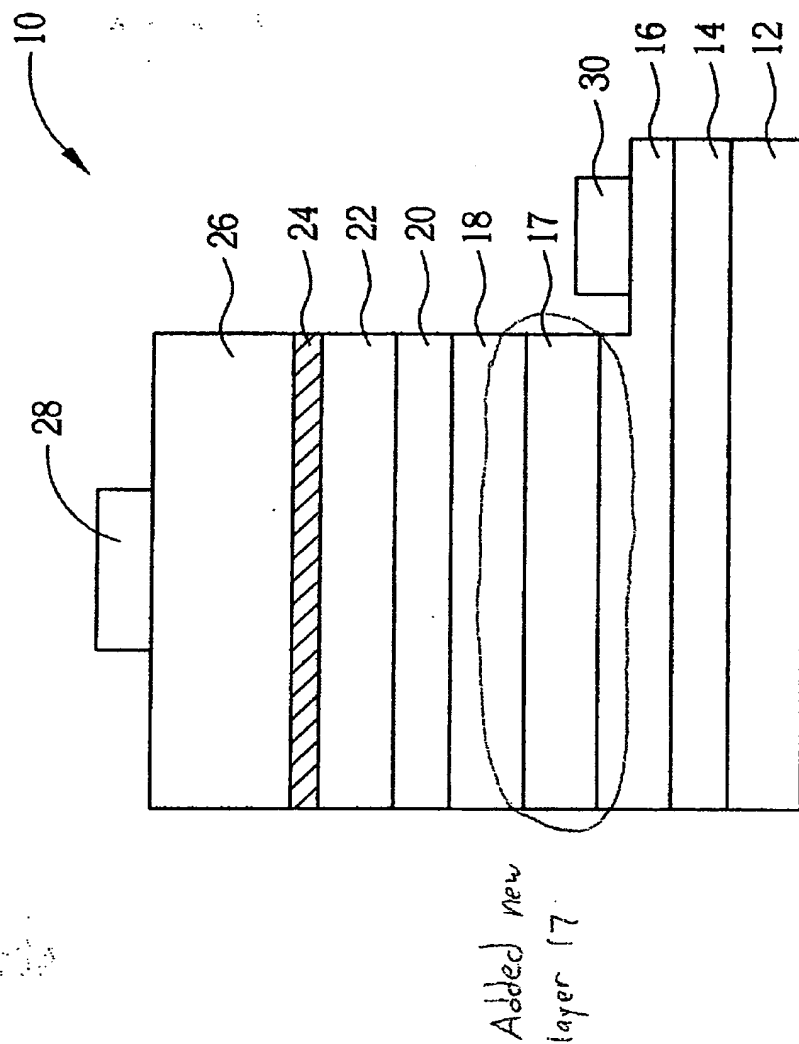


Fig. 1